What will I learn?

The Scheme of Learning for Year 7 is based on White Rose Maths. The content for all groups is based upon this scheme.

WRM – Year 7 Scheme of Learning

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Algebraic Thinking						Place Value and Proportion					
	Sequences		Understand and use algebraic notation		Equality and equivalence		Place value and ordering integers and decimals			Fraction, decimal and percentage equivalence		
Spring	Applications of Number						Directed Number			Fractional Thinking		
	Solving problems with addition & subtraction		Solving problems with multiplication and division			Fractions & percentages of amounts	Four operations with directed number			Addition and subtraction of fractions		
Summer	Lines and Angles						Reasoning with Number					
	Constructing, measuring and using geometric notation			Developing geometric reasoning			Developing number sense		Sets and probability		Prime numbers and proof	

Our Scheme of Learning for the other year groups is based on Kangaroo Maths and we teach for enrichment over acceleration through content. At KS3, students are taught in 'stages' depending upon their attainment, beginning on either Stage 6 or Stage 7 in Year 7 depending on their starting points explained in the table below.

Below expected standard at end of KS2	Expected standard at end of KS2	
Stage 7	Stage 8	Year 8
Stage 8	Stage 9	Year 9

When students reach KS4, they will broadly follow one of 4 pathways:

Foundation **F/H** **Higher** **Higher+**

By analysing common areas of weakness from the mock examinations, we are able to tailor these pathways more to the needs of each individual group at KS4.

Topics within Mathematics are hierarchical and based on learning and mastering skills. Once a particular skill is mastered we progress onto the next. The progression between the skills within each strand of Mathematics is explained using the progression maps below:

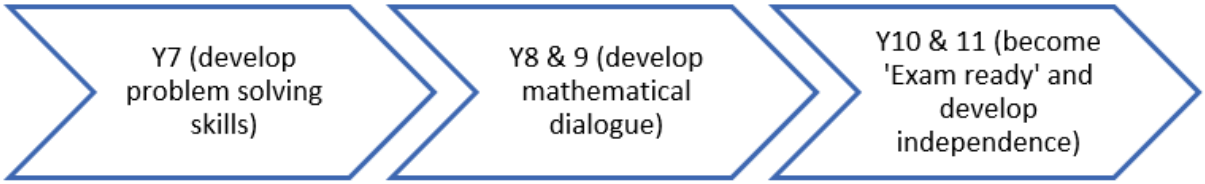
Number
Fractions, Decimals, Percentages, Ratio and Proportion
Algebra
Geometry: Measures and mensuration
Geometry: Shape and construction
Statistics and probability

How will I learn it?

The Poynton High School Mathematics department have developed a shared approach to planning lessons. This is to help develop consistency, ensure high quality resources are used and develop common teaching approaches to certain skills within the curriculum. Lessons begin with a starter, this can be a retrieval practice activity on mixed topics the students have previously been taught. Other times this may be a puzzle style problem using a skill they have learnt recently.

Lessons follow a pattern where students discover or are introduced to a new topic. Once they have grasped the basics, we begin to formalise the method and allow time for some deliberate practice. Once they are beginning to master a topic, lessons are enriched with some less structured problems or puzzles to really push the understanding!

Our teaching staff actively research a variety of teaching and learning strategies from a wide range of academics to help find what works for students at Poynton High School. We are particularly influenced by Craig Barton's research and use a number of his strategies and ideas within our lessons. We believe learners of all abilities need to experience early success within a topic before the understanding is further enriched. By employing techniques such as silent teacher demonstrations and deliberate practice, we have found our students to make deeper connections within and between the areas they are learning. We use visual modelling strategies such as bar modelling, ratio tables, and algebra tiles as they can help visualise a broad range of mathematical ideas using frameworks that are familiar to the students already.



In Year 7, we aim to build our students problem solving skills using well structured, rich resources from a variety of well-regarded sources such as the nRich and Don Steward's Median websites and the Standards Unit. This helps build mathematical resilience, and foster a growth mindset which is so important in learning Mathematics.

Years 8 and 9 are an opportunity to develop mathematical dialogue, making and testing predictions using activities based around Variation Theory, where sequential questions are changed slightly one part at a time. This all helps our students reason mathematically and know how to present solutions to arguments.

Years 10 and 11 are focused on preparing for the GCSE and developing more independence. We introduce our students to a variety of resources, such as the PiXL Maths App prior to the Year 10 Easter mock that help them identify and address their strengths and weaknesses. We use regular Walking Talking Mocks, where a teacher will formally guide students through how to complete an exam paper. Additionally, we provide plenty of practice papers, with mark schemes and worked solutions for the students to help further develop their examination technique using our shared Google Drive. There is a deliberate shift in focus after the Y10 Easter mock from just learning new content to also becoming 'exam ready', developing resilience and confidence.

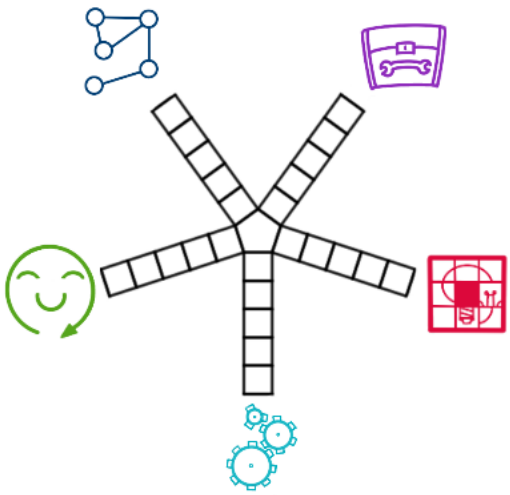
Understanding - Maths is a network of linked ideas. I can connect new mathematical thinking to what I already know and understand.

Tools - I have a toolkit that I can choose tools from to help me solve problems. Practising using these tools helps me become a better mathematician.

Problem solving - Problem solving is an important part of Maths. I can use my understanding, skills and reasoning to help me work towards solutions.

Reasoning - Maths is logical. I can convince myself that my thinking is correct and I can explain my reasoning to others.

Attitude - Maths makes sense and is worth spending time on. I can enjoy Maths and become better at it by persevering.



At Poynton High School, our assessment practices are based on the research of Dylan William and Jo Boaler where we believe the purpose of assessment should be to help progress learning. We use data to inform us of the starting points for students within a class, providing staff with a Red/Amber/Green list of topics for each class. We also employ more informal, low stakes qualitative assessment strategies as a regular part of our lessons. We value the use of well written multiple choice questions to help really draw out and address misconceptions in the students understanding. Students regularly review their own written classwork through peer book reviews and are rewarded for presenting their work in a mathematically clear and fluent format.

Assessments	Students have 6 assessments per year as an opportunity to learn and practice previously taught skills and techniques. Formal Used to determine students' individual strengths and weaknesses and make judgements on attainment. Afterwards, a detailed analysis is completed and strengths and targets are highlighted. Teachers then use this knowledge to progress students. These assessments usually cover content from the previous term to help with Open Book We use this type of assessment to help our students develop their exam technique. Students are encouraged to keep clear and well organised book notes within lessons as they will be able to use these as an aid in these assessments. These assessments usually cover recently studied topics.
Home Learning	Students are given two types of home learning task each fortnight. Online Activity These allow our students to receive immediate feedback on their work. They will usually be set work on a topic that has recently been taught in lesson and deliberately focus on the 'basic skills'. Where a weakness is identified, our online platform allows students to immediately follow up and work on these skills. Written Activity Our written home learning tasks are prescribed centrally by the department to ensure consistency. They help aid retrieval practice by covering topics the students were taught in the previous term. Each task deliberately provokes a little deeper thought than our online tasks, encouraging students to reason and practice problem solving skills on topics they have previously fully covered. Following each written task, students are given feedback (SMART) for improvement which they are encouraged to act upon, writing their feedback in red pen. As the students progress up to GCSE, these tasks begin to consist of more exam standard questions to help familiarise our learners with this style of question.
Stretch and Challenge	For our more able students, we give them an opportunity to take part in events such as the National UKMT Maths Challenge competition.